IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant   : Fangman, et al.   Group Art Unit: 2419

Appl. No.   : 09/903,838   Examiner: LEE, Andrew Chung Cheung

Filed   : July 11, 2001   Confirmation No. 2194

For   : SYSTEM AND METHOD FOR CONFIGURING AN IP TELEPHONY
              DEVICE

APPEAL BRIEF UNDER 37 C.F.R. § 41.37(c)

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

This is an Appeal Brief in support of the Notice of Appeal (filed on May 22, 2009) from the Examiner's final rejection of claims 1-8, 10-23, 25-38, and 40-107 in the Office Action dated January 22, 2009.

Inasmuch as the instant Appeal Brief was filed on May 22, 2009, please extend the time for filing an Appeal Brief by three months, from July 22, 2009 to October 22, 2009. A petition for a three month extension of time with the appropriate fee is being filed concurrently with this Appeal Brief. If additional extensions or fees are deemed by the Patent and Trademark Office to be necessary, the same are hereby requested, and the Patent and Trademark Office is hereby authorized to charge any fees necessary to preserve the pendency of this application to H&A Deposit Account No. 50-2929, referencing Docket No. P116468.

1.   REQUEST FOR EXPEDITED DECISION

None.

2.   APPEAL BRIEF UNDER 37 CFR §41.37(c)(1)

The following is a Table of Contents for this Brief, with Roman numeral indicators in

compliance with 37 CFR §41.37(c)(1).

Table of Contents

(i) <u>Real Party of Interest</u>

The real party in interest in this appeal is Voxpath Networks, Inc., as evidenced by Assignment recorded at Reel 011994, Frame 0761.

(ii) Related Appeals and Interferences

There are no other Appeals or Interferences known to Appellant which may be related to, directly affect or be directly affected by, or have a bearing on the Board's decision in the present Appeal.

(iii) Status of Claims

Claims 9, 24, and 39 have been cancelled. Claims 1-8, 10-23, 25-38, and 40-107 are rejected and are subject to the present Appeal.

Appellant submits the following claim chart for the convenience of the Board in identifying independent claims and the claims dependent thereon.

Independent claims	Dependent claims
Claim 1	2-8, 10-15
Claim 16	17-23, 25-30
Claim 31	32-38, 40-45
Claim 46	47-59
Claim 60	61-67
Claim 68	69-75
Claim 76	77-80
Claim 81	82, 83
Claim 84	85-91
Claim 92	93-99
Claim 100	101-103
Claim 105	106, 107

(iv) Status of Amendments

No Amendment has been filed since the mailing of the final rejection.

(v) **Summary of Claimed Subject Matter**

The claimed invention will be described with reference to the original specification and original drawings as filed on July 11, 2001.

Independent claims 1, 16, 31, and 46 have at least one common feature (receiving an identifier from an IP telephone), and independent claims 60, 68, 76, 81, 84, 92, 100, and 105 have at least one common feature (performing network address translation (NAT) on the first data packet with a second private IP address, the second private IP address being assigned by a service provider). Hence, the claimed subject matter will be described relative to these independent claims.

The invention as defined in independent claim 1, and with reference to FIGS. 2, 4B, and 5A and as described in detail in pages 31, line 12 to page 32, line 28, comprises a method for configuring an IP telephone, comprising: receiving an identifier from the IP telephone (506); determining if a MAC ID for the IP telephone is valid (510); if the MAC ID is determined to be valid, determining if the identifier is valid (512); if the identifier is valid, assigning a range of port numbers to the IP telephone based on the identifier (452), wherein the IP telephone is operable to use at least a subset of the range of port numbers to send or receive IP communications (452).

The invention as defined in independent claim 16, and with reference to FIGS. 2, 3A, 4B, and 5A and as described in detail in pages 31, line 12 to page 32, line 28, comprises a system for performing IP telephony, comprising: a network (140); an IP telephone (120A); a Service Gateway (170), wherein the Service Gateway is operable to couple to the IP telephone through the network; wherein the IP telephone (120A) is operable to send an identifier to the Service Gateway (170); wherein the Service Gateway (170) is operable to: receive an identifier from the

IP telephone (506); determine if a MAC ID for the IP telephone is valid (510); if the MAC ID is determined to be valid, determine if the identifier is valid (512); and if the identifier is valid, assign a range of port numbers to the IP telephone based on the identifier (452); wherein the IP telephone is operable to use at least a subset of the range of port numbers to send or receive IP communications (452).

The invention as defined in independent claim 31, with reference to FIGS. 2, 3A, 4B, and 5A and as described in detail in pages 31, line 12 to page 32, line 28, comprises a memory medium, wherein the memory medium stores program instructions which are executable to perform: receiving an identifier from the IP telephone (506); determining if a MAC ID for the IP telephone is valid (510); if the MAC ID is determined to be valid, determining if the identifier is valid (512); and if the identifier is valid, assigning a range of port numbers to the IP telephone based on the identifier (452), wherein the IP telephone is operable to use at least a subset of the range of port numbers to send or receive IP communications (452).

The invention as defined in independent claim 46, with reference to FIGS. 2, 3A, 4B, and 5A and as described in detail in pages 31, line 12 to page 32, line 28, comprises a service gateway 170 for use in an IP telephony network (140), wherein the service gateway (140) is configured to: couple one or more IP telephones (120A) to the network (140); receive an identifier from an IP telephone (506); determine if a MAC ID for the IP telephone is valid (510); if the MAC ID is determined to be valid, determine if the identifier is valid (512); and if the identifier is valid, assign a range of port numbers to the IP telephone based on the identifier (452); wherein at least a subset of the range of port numbers are usable by the IP telephone to send or receive IP communications (452).

The invention as defined in independent claim 60, with reference to page 32, lines 11-23 (as previously referenced on page 29 of the Response filed by Applicant on September 5, 2008), and with reference to FIGS. 4B-11 and related portions of the specification, comprises a system for hosted voice over internet protocol communications, the system comprising: an internet protocol device (IPD) configured to convey a first data packet with a first private IP address; and a service gateway (SG); wherein the SG is configured to: receive the first data packet with the first private IP address; and perform network address translation (NAT) on the first data packet with a second private IP address, the second private IP address being assigned by a service provider.

The invention as defined in independent claim 68, with reference to page 32, lines 11-23 (as previously referenced on page 29 of the Response filed by Applicant on September 5, 2008) and with reference to FIGS. 4B-11 and related portions of the specification, a method for hosting voice over internet protocol communications, the method comprising: receiving a first data packet with a private IP address at a service gateway (SG), the first data packet being conveyed with the private IP address from an internet protocol device (IPD); and performing network address translation (NAT) on the first data packet with a second private IP address.

The invention as defined in independent claim 76, with reference to page 32, lines 11-23 (as previously referenced on page 29 of the Response filed by Applicant on September 5, 2008) and with reference to FIGS. 4B-11 and related portions of the specification, comprises one or more computer readable storage media, said media comprising program instructions for hosting voice over internet protocol communications, wherein the program instructions are executable to: receive a first data packet with a private IP address at a service gateway (SG), the first data packet being conveyed with the private IP address from an internet protocol device (IPD);

perform network address translation (NAT) on the first data packet with a second private IP address.

The invention as defined in independent claim 81, with reference to page 32, lines 11-23 (as previously referenced on page 29 of the Response filed by Applicant on September 5, 2008) and with reference to FIGS. 4B-11 and related portions of the specification, comprises a service gateway for use in a voice over internet protocol communications system, the service gateway comprising: a first interface configured to receive a first data packet with a first private IP address from an internet protocol device (IPD); and a second interface configured to communicate via a tunnel; wherein the service gateway is configured to perform network address translation on the first data packet with a second private IP address.

The invention as defined in independent claim 84, with reference to page 32, lines 11-23 (as previously referenced on page 29 of the Response filed by Applicant on September 5, 2008) and with reference to FIGS. 4B-11 and related portions of the specification, comprises a system for hosted voice over internet protocol communications, the system comprising: an internet protocol device (IPD) configured to convey a first data packet with a private IP address; and a service gateway (SG); wherein the SG is configured to: receive the first data packet with the private IP address; and perform network address translation (NAT) on the first data packet with a first public IP address.

The invention as defined in independent claim 92, with reference to page 32, lines 11-23 (as previously referenced on page 29 of the Response filed by Applicant on September 5, 2008) and with reference to FIGS. 4B-11 and related portions of the specification, comprises a method for hosting voice over internet protocol communications, the method comprising: receiving a first data packet with a private IP address at a service gateway (SG), the first data packet being

conveyed with the private IP address from an internet protocol device (IPD); and performing

network address translation (NAT) on the first data packet with a first public IP address.

The invention as defined in independent claim 100, with reference to page 32, lines 11-23

(as previously referenced on page 29 of the Response filed by Applicant on September 5, 2008)

and with reference to FIGS. 4B-11 and related portions of the specification, comprises one or

more computer readable storage media, said media comprising program instructions for hosting

voice over internet protocol communications, wherein the program instructions are executable

to: receive a first data packet with a private IP address at a service gateway (SG), the first data

packet being conveyed with the private IP address from an internet protocol device (IPD); and

perform network address translation (NAT) on the first data packet with a first public IP address.

The invention as defined in independent claim 105, with reference to page 32, lines 11-23

(as previously referenced on page 29 of the Response filed by Applicant on September 5, 2008)

and with reference to FIGS. 4B-11, comprises a service gateway for use in a voice over internet

protocol communications system, the service gateway comprising: a first interface configured to

receive a first data packet with a private IP address from an internet protocol device (IPD); and a

second interface configured to communicate via a tunnel; wherein the service gateway is

configured to: perform network address translation (NAT) on the first data packet with a first

public IP address.

(vi) Grounds of Rejection to be Reviewed on Appeal

The issues to be reviewed on Appeal are as follows (all pending rejections are appealed):

(a) Are claims 1-7, 15-22, 30-37, 45-52 and 59 unpatentable under 35 U.S.C. §103(a) over U.S. Patent No. 6,958,992 (hereinafter "Lee") in view of U.S. Patent No. 6,822,957 (hereinafter "Schuster").

(b) Are claims 8, 10-14, 23, 25-29, 38, 40-44, 53-58 unpatentable under 35 U.S.C §103(a) over Lee and Schuster in further view of U.S. Patent No. 6,577,642 (hereinafter "Fijolek"). Appellant notes that claim 55 is apparently rejected on page 14 of the Office Action dated January 22, 2009, although claim 55 is not explicitly listed as rejected in item 7 on page 11 of the Office Action.

(c) Are claims 60, 68, 76, 81, 84, 92, 100, and 105 anticipated under 35 U.S.C. § 102(e) by U.S. Patent No. 6,772,210 (hereinafter "Edholm").

(d) Are claims 61-66, 69-74, 77-80, 82, 85-90, 93-98, 101-104, and 106 unpatentable under 35 U.S.C. § 103(a) over Edholm in view of U.S. Patent Publication No. 2002/0093915 (hereinafter "Larson").

(e) Are claims 67, 75, 83, 91, 99 and 107 unpatentable under 35 U.S.C. § 103(a) over Edholm in view of Larson, and in further view of U.S. Patent No. 6,882,957.

(vii) **Arguments for Patentability**

(a) 35 U.S.C. § 103 Rejections over Lee in view of Shuster

Claims 1-7, 15-22, 30-37, 45-52, and 59 are finally rejected under 35 U.S.C. §103(a) as

allegedly being unpatentable over U.S. Patent No. 6,958,992 (hereinafter "Lee") in view of U.S.

Patent No. 6,822,957 (hereinafter "Schuster"). Appellant urges that this rejection is in error and

requests reconsideration by the Examiner or reversal by the Board in view of the following

comments.

Independent claim 1 recites, in part:

> "**receiving an identifier from the IP telephone;**
> determining if a MAC ID for the IP telephone is valid;
> if the MAC ID is determined to be valid, determining if the identifier is
> valid;
> if the identifier is valid, assigning a range of port numbers to the IP
> telephone based on the identifier, wherein the IP telephone is operable to
> use at least a subset of the range of port numbers to send or receive IP
> communications." (emphasis added)

In paragraph 6 of the Office Action dated January 22, 2009, the Examiner asserts that that

Lee discloses:

> "**receiving an identifier from the IP telephone (Fig. 3, element 320
> Service Provider ID, col. 3, lines 23 - 32);** determining if the identifier is
> valid (Fig. 3, col. 3, lines 33 - 39); determining if a MAC ID for the IP
> telephone is valid (Fig. 3, col. 3, lines 33 - 39); if the MAC ID is
> determined to be valid, determining if the identifier is valid (Fig. 4, col. 4,
> lines 12 - 24, col. 6, lines 14 - 26)."
> (emphasis added)

Appellant respectfully submits that the Examiner has clearly misinterpreted FIG. 3 and

the Lee patent disclosure. Specifically, element 320 of FIG. 3 is described by Lee as a

communication transmitted by "IP Phone Service Provider" 202, and the communication is

described as "Open Port (**Svc Provider ID**, MAC, Set Type, Port)" 320. The communication is

received by "(Per Control Set Registration Process)" 204.

The term "Svc Provider ID" of FIG. 3 of Lee refers to the ID of "IP Phone Service

Provider" 202 that transmitted the communication element 320. The "IP Phone" 102 is a

distinct entity, and <u>"IP Phone" 102 does not transmit any "Svc Provider ID."</u> At best, Lee

discloses merely receiving "Svc Provider ID" 320 from "IP Phone Service Provider" 202. Lee

does not discloses a method which comprises receiving an identifier from the IP telephone.

Appellant submits that the "Svc Provider ID" of Lee does not teach or suggest the

independent claim 1 feature of "receiving an identifier from the IP telephone."

Appellant submits that claim 1 is patentable for at least the above reasons. Lee does not

teach or suggest an important element of the claims on appeal, and Schuster does not remedy the

deficiency of Lee. The Examiner has not made a prima facie case of obviousness.

Appellant urges that patentable claims 16, 31, and 46 recite features similar to claim 1,

and therefore are patentable for at least the same reasons as claim 1.

Additionally, Appellant urges that dependent claims 2-7, 15-22, 30-37, 45-52, and 59 are

patentable for, at a minimum, the same reasons as their respective base claims, as well as on their

own merits.

(b) 35 U.S.C. § 103 Rejections over Lee and Shuster in view of Fijolek

Claims 8, 10-14, 23, 25-29, 38, 40-44, and 53-58 are finally rejected under 35 U.S.C

§103(a) as allegedly being unpatentable over Lee and Schuster in further view of U.S. Patent No.

6,577,642 (hereinafter "Fijolek"). Appellant notes that claim 55 is apparently rejected on page

14 of the Office Action dated January 22, 2009, although claim 55 is not explicitly listed as rejected in item 7 on page 11 of the Office Action.

Dependent claims 8, 10-14, 23, 25-29, 38, 40-44, and 53-58 are patentable for, at a minimum, the same reasons as their respective base claims, as well as on their own merits. As noted above, Lee does not teach or suggest a specific element of the claims on appeal. Schuster does not remedy this deficiency, and neither does Fijolek.

Appellant urges the Examiner to reconsider and withdraw this rejection and, in the event the Examiner does not withdraw the rejection, the Board is requested to reverse the rejection.

(c) 35 U.S.C. § 102(e) Rejections over Edholm

Claims 60, 68, 76, 81, 84, 92, 100, and 105 are finally rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,772,210 (hereinafter "Edholm").

Independent claim 60 recites, in part,

> "receive the first data packet with the first private IP address; and **perform network address translation (NAT) on the first data packet with a second private IP address**, the second private IP address being assigned by a service provider." (emphasis added)

The Examiner in the Office Action dated January 22, 2009, at pages 16 and 17, asserts that Edholm discloses that:

> "[T]he SG is configured to: receive the first data packet with the first private IP address (Fig. 4, element 404, col. 6, lines 57 - 60); and **perform network address translation (NAT) on the first data packet with a second private IP address,** the second private IP address being assigned by a service provider (col. 4, lines 56 - 66, col. 6, line 67, col. 7, lines 1-12." (emphasis added)

Appellant respectfully disagrees. Edholm, at column 4, lines 56-66, states:

"The calling VoIP device typically obtains the (public) network address or address/port number pair for the called VoIP device directly or indirectly from the gateway 106. Specifically, a request may be sent to the gateway 106 requesting the (public) network address for the called VoIP device. The request may be sent by the gatekeeper 112, in which case the gatekeeper 112 obtains the (public) network address for the called VoIP device from the gateway 106 and provides the (public) network address for the called VoIP device to the calling VoIP device, typically along with the gateway address."

Further, Edholm, at column 6, line 67 to column 7, line 12, states:

The logic selects a public address for the private VoIP device 110 from an address pool, in block 412, and optionally selects a port number (socket) for the private VoIP device 110, in block 414. The logic installs an address translation entry in the address mapping database **mapping the private address of the private VoIP device 110 to the public address** or public address/port number pair for the private VoIP device 110, in block 416. The logic determines the public address for the public VoIP device 102, in block 418, for example, based upon address mapping information contained in an address mapping database. The logic returns the public address for the public VoIP device, in block 420. The logic 400 terminates in block 499. (emphasis added)

It is clear from the above citations that **Edholm does not teach or suggest performing network address translation with a second private IP address, as required by appealed claim 60.** In contrast to the requirements of claim 60, Edholm describes "mapping the private address of the private VoIP device 110 to the public address . . ." Even if one were to assume the disclosed private address and public address of Edholm were a private IP address and public IP address (which Appellant does not admit), there is no disclosure of a translation with a second private IP address as required by claim 60.

Appellant submits claim 60 is patentable over Edholm, and withdrawal of the rejection is requested. Anticipation requires an exact disclosure of the claim elements in the claim in question. Such is not the case herein, in as much as Edholm lacks performing network address

translation with a second private IP address.

Independent claims 68, 76, 81, 84, 92, 100, and 105 contain features similar to independent claim 60, and are patentable for, at a minimum, reasons similar to those given above for claim 60, as well as on their own merits.

Appellant urges the Examiner to reconsider and withdraw this rejection and, in the event the Examiner does not withdraw the rejection, the Board is requested to reverse the rejection.

(d) 35 U.S.C. § 103 Rejections over Edholm in view of Larson

Claims 61-66, 69-74, 77-80, 82, 85-90, 93-98, 101-104, and 106 are finally rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Edholm in view of U.S. Patent Publication No. 2002/0093915 (hereinafter "Larson").

As discussed above, claims 60, 68, 76, 81, 84, 92, 100, and 105 are patentable since Edholm does not teach or suggest all of the elements of those claims. Larson does not remedy the deficiencies of Edholm. Appellant submits that claims 61-66, 69-74, 77-80, 82, 85-90, 93-98, 101-104, and 106, which depend from claims 60, 68, 76, 81, 84, 92, 100, and 105, are patentable for, at a minimum, the same reasons as their respective independent claims, as well as on their own merits.

Appellant urges the Examiner to reconsider and withdraw this rejection and, in the event the Examiner does not withdraw the rejection, the Board is requested to reverse the rejection.

(e) 35 U.S.C. § 103 Rejections over Edholm and Larson in view of Schuster

Claims 67, 75, 83, 91, 99 and 107 are finally rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Edholm in view of Larson, and in further view of U.S. Patent

No. 6,882,957 (hereinafter "Schuster").

As discussed above, claims 60, 68, 81, 84, 92, and 105 are patentable over the art relied upon by the Examiner. Appellant submits that claims 67, 75, 83, 91, 99 and 107, which are dependent from these claims, are patentable for, at a minimum, the same reasons as their respective base claims, as well as on their own merits.

Appellant urges the Examiner to reconsider and withdraw this rejection and, in the event the Examiner does not withdraw the rejection, the Board is requested to reverse the rejection.

<u>Conclusion</u>

Appellant respectfully requests a reversal of all of the Examiner's rejections of the claims

on appeal, and remand to the Examiner for issuance of a Notice of Allowance of all the claims

on appeal.

Please direct any questions to the undersigned at the below-listed telephone number.

Respectfully submitted,

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(viii)   Claims Appendix

A list of the pending claims is presented below.

1. (Previously Presented) A method for configuring an IP telephone, comprising:

    receiving an identifier from the IP telephone;

    determining if a MAC ID for the IP telephone is valid;

    if the MAC ID is determined to be valid, determining if the identifier is valid;

    if the identifier is valid, assigning a range of port numbers to the IP telephone based on

the identifier, wherein the IP telephone is operable to use at least a subset of the range of port

numbers to send or receive IP communications.

2. (Original) The method of claim 1, wherein said range of port numbers comprises ports which

are not reserved for use by other IP protocols.

3. (Original) The method of claim 1, further comprising:

    mediating IP communications between the IP telephone and an IP device, wherein the IP

telephone uses at least a subset of the range of port numbers to send or receive said IP

communications.

4. (Original) The method of claim 3, wherein said mediating the IP communications comprises:

    receiving a data packet from the IP telephone,

    performing a network address persistent port translation (NAPPT) on the data packet; and

    sending the data packet to the IP device.

5. (Original) The method of claim 4,

wherein the data packet comprises a private source IP address, a source port number, and destination information associated with the IP device,

wherein the private source IP address comprises a private IP address of the IP telephone, and wherein the source port number comprises a port number in the assigned range of port numbers; and

wherein said performing a network address persistent port translation (NAPPT) on the data packet comprises changing the private source IP address to a public source IP address while leaving the source port number unchanged, and wherein the public source IP address and the source port number may be used to uniquely identify the IP telephone.

6. (Original) The method of claim 3, wherein said mediating the IP communications comprises:

receiving a data packet from the IP device;

performing a network address persistent port translation (NAPPT) on the data packet; and

sending the data packet to the IP telephone.

7. (Original) The method of claim 6,

wherein the data packet comprises a public destination IP address, a destination port number; and source information associated with the IP device, wherein the destination port number comprises a port number in the assigned range of port numbers, and wherein the public destination IP address and the destination port number may be used to uniquely identify the IP telephone; and

wherein said performing a network address persistent port translation (NAPPT) on the

data packet comprises using the public destination IP address and the destination port number to uniquely identify the IP telephone, and changing the public destination IP address to a private destination IP address while leaving the destination port number unchanged, wherein the private IP address comprises an IP address of the IP telephone.

8. (Original) The method of claim 1, wherein the identifier comprises a vendor class identifier.

9. (Cancelled)

10. (Original) The method of claim 1, wherein said identifier is comprised in a DHCP discover message, the method further comprising:

issuing a DHCP offer to the IP telephone if the identifier is determined to be valid, wherein the DHCP offer comprises DHCP lease information based on the validated identifier;

the IP telephone issuing a DHCP request in response to the issued DHCP offer;

storing the DHCP lease information in response to the issued DHCP request;

the IP telephone storing the DHCP lease information; and

the IP telephone enabling DHCP settings comprised in the DHCP lease information.

11. (Original) The method of claim 10, wherein said DHCP lease information includes the range of port numbers and information indicating operational software for the IP telephone, the method further comprising:

the IP telephone executing the indicated operational software to enable said IP communications.

12. (Original) The method of claim 10, wherein said DHCP lease information includes the range of port numbers and information indicating operational software for the IP telephone, the method further comprising:

the IP telephone issuing a request for the operational software;

providing the operational software to the IP telephone in response to the issued request;

and

the IP telephone executing the provided operational software to enable said IP communications.

13. (Original) The method of claim 12, wherein said issuing the request for the operational software comprises issuing a read request to a file transfer server, wherein said file transfer server performs said providing the operational software to the IP telephone.

14. (Original) The method of claim 13, wherein the file transfer server comprises a TFTP (Trivial File Transfer Protocol) server.

15. (Original) The method of claim 1, wherein the range of port numbers comprises one or more port numbers.

16. (Previously Presented) A system for performing IP telephony, comprising:

a network;

an IP telephone;

a Service Gateway, wherein the Service Gateway is operable to couple to the IP

telephone through the network;

wherein the IP telephone is operable to send an identifier to the Service Gateway;

wherein the Service Gateway is operable to:

receive an identifier from the IP telephone;

determine if a MAC ID for the IP telephone is valid;

if the MAC ID is determined to be valid, determine if the identifier is valid; and

if the identifier is valid, assign a range of port numbers to the IP telephone based

on the identifier;

wherein the IP telephone is operable to use at least a subset of the range of port numbers

to send or receive IP communications.

17. (Original) The system of claim 16, wherein said range of port numbers comprises ports

which are not reserved for use by other IP protocols.

18. (Original) The system of claim 16, wherein the Service Gateway is further operable to

mediate IP communications between the IP telephone and an IP device.

19. (Original) The system of claim 18, wherein, in mediating the IP communications the Service

Gateway is operable to:

receive a data packet from the IP telephone,

perform a network address persistent port translation (NAPPT) on the data packet; and

send the data packet to the IP device.

20. (Original) The system of claim 19,

 wherein the data packet comprises a private source IP address, a source port number, and destination information associated with the IP device, wherein the private source IP address comprises a private IP address of the IP telephone, and wherein the source port number comprises a port number in the assigned range of port numbers; and

 wherein said performing a network address persistent port translation (NAPPT) on the data packet comprises changing the private source IP address to a public source IP address while leaving the source port number unchanged, and wherein the public source IP address and the source port number may be used to uniquely identify the IP telephone.

21. (Original) The system of claim 18, wherein, in mediating the IP communications the Service Gateway is operable to:

 receive a data packet from the IP device;

 perform a network address persistent port translation (NAPPT) on the data packet; and

 send the data packet to the IP telephone.

22. (Original) The system of claim 21,

 wherein the data packet comprises a public destination IP address, a destination port number; and source information associated with the IP device, wherein the destination port number comprises a port number in the assigned range of port numbers, and wherein the public destination IP address and the destination port number may be used to uniquely identify the IP telephone; and

wherein said performing a network address persistent port translation (NAPPT) on the

data packet comprises using the public destination IP address and the destination port number to

uniquely identify the IP telephone, and changing the public destination IP address to a private

destination IP address while leaving the destination port number unchanged, wherein the private

IP address comprises an IP address of the IP telephone.

23. (Original) The system of claim 16, wherein the identifier comprises a vendor class identifier.

24. (Cancelled)

25. (Original) The system of claim 16,

    wherein said identifier is comprised in a DHCP discover message,

    wherein the Service Gateway is further operable to: issue a DHCP offer to the IP

telephone if the identifier is determined to be valid, wherein the DHCP offer comprises DHCP

lease information based on the validated identifier;

    wherein the IP telephone is further operable to:

        issue a DHCP request in response to the issued DHCP offer;

        store the DHCP lease information; and

        enable DHCP settings comprised in the DHCP lease information; and

    wherein the Service Gateway is further operable to: store the DHCP lease information in

response to the issued DHCP request.

26. (Original) The system of claim 25, wherein said DHCP lease information includes the range

of port numbers and information indicating operational software for the IP telephone, wherein

the IP telephone is further operable to:

    execute the indicated operational software to enable said IP communications.

27. (Original) The system of claim 25, wherein said DHCP lease information includes the range

of port numbers and information indicating operational software for the IP telephone,

    wherein the IP telephone is further operable to: issue a request for the operational

software;

    wherein the Service Gateway is further operable to: provide the operational software to

the IP telephone in response to the issued request; and

    wherein the IP telephone is further operable to: execute the provided operational software

to enable said IP communications.

28. (Original) The system of claim 27, wherein, in issuing the request for the operational

software, the IP telephone is operable to issue a read request to a file transfer server, wherein

said file transfer server is operable to provide the operational software to the IP telephone.

29. (Original) The system of claim 28, wherein the file transfer server comprises a TFTP

(Trivial File Transfer Protocol) server.

30. (Original) The system of claim 16, wherein the range of port numbers comprises one or

more port numbers.

31. (Previously Presented) A memory medium, wherein the memory medium stores program instructions which are executable to perform:

    receiving an identifier from the IP telephone;

    determining if a MAC ID for the IP telephone is valid;

    if the MAC ID is determined to be valid, determining if the identifier is valid; and

    if the identifier is valid, assigning a range of port numbers to the IP telephone based on the identifier, wherein the IP telephone is operable to use at least a subset of the range of port numbers to send or receive IP communications.

32. (Original) The memory medium of claim 31, wherein said range of port numbers comprises ports which are not reserved for use by other IP protocols.

33. (Original) The memory medium of claim 31, wherein the program instructions are further executable to perform:

    mediating IP communications between the IP telephone and an IP device, wherein the IP telephone uses at least a subset of the range of port numbers to send or receive said IP communications.

34. (Original) The memory medium of claim 33, wherein said mediating the IP communications comprises:

    receiving a data packet from the IP telephone,

    performing a network address persistent port translation (NAPPT) on the data packet; and

    sending the data packet to the IP device.

35. (Original) The memory medium of claim 34,

wherein the data packet comprises a private source IP address, a source port number, and destination information associated with the IP device, wherein the private source IP address comprises a private IP address of the IP telephone, and wherein the source port number comprises a port number in the assigned range of port numbers; and

wherein said performing a network address persistent port translation (NAPPT) on the data packet comprises changing the private source IP address to a public source IP address while leaving the source port number unchanged, and wherein the public source IP address and the source port number may be used to uniquely identify the IP telephone.

36. (Original) The memory medium of claim 33, wherein said mediating the IP communications comprises:

receiving a data packet from the IP device;

performing a network address persistent port translation (NAPPT) on the data packet; and

sending the data packet to the IP telephone.

37. (Original) The memory medium of claim 36,

wherein the data packet comprises a public destination IP address, a destination port number; and source information associated with the IP device, wherein the destination port number comprises a port number in the assigned range of port numbers, and

wherein the public destination IP address and the destination port number may be used to uniquely identify the IP telephone; and

wherein said performing a network address persistent port translation (NAPPT) on the data packet comprises using the public destination IP address and the destination port number to uniquely identify the IP telephone, and changing the public destination IP address to a private destination IP address while leaving the destination port number unchanged, wherein the private IP address comprises an IP address of the IP telephone.

38. (Original) The memory medium of claim 31, wherein the identifier comprises a vendor class identifier.

39. (Cancelled).

40. (Original) The memory medium of claim 31, wherein said identifier is comprised in a DHCP discover message, wherein the program instructions are further executable to perform:

issuing a DHCP offer to the IP telephone if the identifier is determined to be valid, wherein the DHCP offer comprises DHCP lease information based on the validated identifier;

receiving a DHCP request from the IP telephone in response to the issued DHCP offer; and

storing the DHCP lease information in response to the issued DHCP request;

wherein said program instructions comprise IP telephone program instructions which are executable to: store the DHCP lease information; and enable DHCP settings comprised in the DHCP lease information.

41. (Original) The memory medium of claim 40, wherein said DHCP lease information includes

the range of port numbers and information indicating operational software for the IP telephone,

wherein the indicated operational software is executable by the IP telephone to enable said IP

communications.

42. (Original) The memory medium of claim 40, wherein said DHCP lease information includes

the range of port numbers and information indicating operational software for the IP telephone,

wherein the program instructions are further executable to perform:

      receiving a request for the operational software from the IP telephone;

      providing the operational software to the IP telephone in response to the issued request;

and

      wherein the provided operational software is executable by the IP telephone to enable

said IP communications.

43. (Original) The memory medium of claim 42,

      wherein the IP telephone program instructions are executable to issue a read request to a

file transfer server;

      wherein said program instructions further comprise file transfer server program

instructions executable to perform said providing the operational software to the IP telephone.

44. (Original) The memory medium of claim 43, wherein the file transfer server comprises a

TFTP (Trivial File Transfer Protocol) server.

45. (Original) The memory medium of claim 31, wherein the range of port numbers comprises

one or more port numbers.

46. (Previously Presented) A service gateway for use in an IP telephony network, wherein the service gateway is configured to:

couple one or more IP telephones to the network;

receive an identifier from an IP telephone;

determine if a MAC ID for the IP telephone is valid;

if the MAC ID is determined to be valid, determine if the identifier is valid; and

if the identifier is valid, assign a range of port numbers to the IP telephone based on the identifier;

wherein at least a subset of the range of port numbers are usable by the IP telephone to send or receive IP communications.

47. (Previously Presented) The service gateway of claim 46, wherein said range of port numbers comprises ports which are not reserved for use by other IP protocols.

48. (Previously Presented) The service gateway of claim 46, wherein the service gateway is further configured to mediate IP communications between the IP telephone and an IP device.

49. (Previously Presented) The service gateway of claim 48, wherein, in mediating the IP communications the service gateway is further configured to:

receive a data packet from the IP telephone,

perform a network address persistent port translation (NAPPT) on the data packet; and

send the data packet to the IP device.

50. (Previously Presented) The service gateway of claim 49,

wherein the data packet comprises a private source IP address, a source port number, and destination information associated with the IP device, wherein the private source IP address comprises a private IP address of the IP telephone, and wherein the source port number comprises a port number in the assigned range of port numbers; and

wherein said performing a network address persistent port translation (NAPPT) on the data packet comprises changing the private source IP address to a public source IP address while leaving the source port number unchanged, and wherein the public source IP address and the source port number may be used to uniquely identify the IP telephone.

51. (Previously Presented) The service gateway of claim 48, wherein, in mediating the IP communications, the service gateway is further configured to:

receive a data packet from the IP device;

perform a network address persistent port translation (NAPPT) on the data packet; and

send the data packet to the IP telephone.

52. (Previously Presented) The service gateway of claim 51,

wherein the data packet comprises a public destination IP address, a destination port number; and source information associated with the IP device, wherein the destination port number comprises a port number in the assigned range of port numbers, and wherein the public

destination IP address and the destination port number may be used to uniquely identify the IP telephone; and

wherein said performing a network address persistent port translation (NAPPT) on the data packet comprises using the public destination IP address and the destination port number to uniquely identify the IP telephone, and changing the public destination IP address to a private destination IP address while leaving the destination port number unchanged, wherein the private IP address comprises an IP address of the IP telephone.

53. (Previously Presented) The service gateway of claim 46, wherein the identifier comprises a vendor class identifier.

54. (Previously Presented) The service gateway of claim 46,

wherein said identifier is comprised in a DHCP discover message, wherein the service gateway is further configured to:

issue a DHCP offer to the IP telephone if the identifier is determined to be valid, wherein the DHCP offer comprises DHCP lease information based on the validated identifier;

wherein the IP telephone is further operable to:

issue a DHCP request in response to the issued DHCP offer;

store the DHCP lease information; and

enable DHCP settings comprised in the DHCP lease information; and

wherein the service gateway is further configured to:

store the DHCP lease information in response to the issued DHCP request.

55. (Previously Presented) The service gateway of claim 54, wherein said DHCP lease information includes the range of port numbers and information indicating operational software for the IP telephone, wherein the IP telephone is further operable to:

execute the indicated operational software to enable said IP communications.

56. (Previously Presented) The service gateway of claim 54, wherein said DHCP lease information includes the range of port numbers and information indicating operational software for the IP telephone,

wherein the IP telephone is further operable to issue a request for the operational software;

wherein the service gateway is further operable to provide the operational software to the IP telephone in response to the issued request; and

wherein the IP telephone is further operable to execute the provided operational software to enable said IP communications.

57. (Previously Presented) The service gateway of claim 56, wherein, in issuing the request for the operational software, the IP telephone is operable to issue a read request to a file transfer server, wherein said file transfer server is operable to provide the operational software to the IP telephone.

58. (Previously Presented) The service gateway of claim 57, wherein the file transfer server comprises a TFTP (Trivial File Transfer Protocol) server.

59. (Previously Presented) The service gateway of claim 46, wherein the range of port numbers comprises one or more port numbers.

60. (Previously Presented) A system for hosted voice over internet protocol communications, the system comprising:

an internet protocol device (IPD) configured to convey a first data packet with a first private IP address; and

a service gateway (SG);

wherein the SG is configured to: receive the first data packet with the first private IP address; and perform network address translation (NAT) on the first data packet with a second private IP address, the second private IP address being assigned by a service provider.

61. (Previously Presented) The system of claim 60, wherein the SG is further configured to:

encapsulate the translated first data packet to form a first encapsulated data packet, the first encapsulated data packet having a first public IP address as a destination address and a second public IP address as a source address; and

convey the first encapsulated data packet via a tunnel.

62. (Previously Presented) The system of claim 61, further comprising a virtual private network concentrator (VPNC) coupled to the SG via a network, wherein the VPNC is configured to:

receive the first encapsulated data packet via the tunnel;

un-encapsulate the first encapsulated data packet to recover the first data packet including the second private IP address; and

convey the first data packet to a destination.

63. (Previously Presented) The system of claim 62, wherein a second data packet destined for the

IPD is conveyed to the second private IP address, and wherein the VPNC is configured to:

     receive the second data packet routed using the second private IP address;

     encapsulate the received second data packet to form a second encapsulated data packet

with a destination IP address comprising the second public IP address; and

     convey the second encapsulated data packet via a tunnel using the second public IP

address as a destination IP address.

64. (Previously Presented) The system of claim 63, wherein the SG is configured to:

     receive the second encapsulated data packet;

     un-encapsulate the second encapsulated data packet to recover the second data packet, the

second data packet having the second public IP address as a destination IP address;

     perform network address translation on the second data packet; and

     convey the second data packet to the IPD using the first private IP address as a

destination address.

65. (Previously Presented) The system of claim 61, wherein the second private IP address of the

service gateway is assigned by a service provider.

66. (Previously Presented) The system of claim 61, wherein the SG is configured to only

encapsulate packets conveyed by the IPD that are signaling packets.

67. (Previously Presented) The system of claim 61,

wherein the first data packet comprises the first private IP address as a source IP address and a source port number; and

wherein in performing said network address translation, the SG is configured to change the first private IP address to the second private IP address while leaving the source port number unchanged, wherein the second private IP address and the source port number may be used to uniquely identify the IPD.

68. (Previously Presented) A method for hosting voice over internet protocol communications, the method comprising:

receiving a first data packet with a private IP address at a service gateway (SG), the first data packet being conveyed with the private IP address from an internet protocol device (IPD); and

performing network address translation (NAT) on the first data packet with a second private IP address.

69. (Previously Presented) The method of claim 68, further comprising:

encapsulating the translated first data packet to form a first encapsulated data packet, the first encapsulated data packet having a first public IP address as a destination address and a second public IP address as a source address; and

conveying the first encapsulated data packet from the SG via a tunnel.

70. (Previously Presented) The method of claim 69, further comprising:

receiving the first encapsulated data packet via the tunnel at a virtual private network concentrator (VPNC);

un-encapsulating the first encapsulated data packet to recover the first data packet including the second private IP address; and

conveying the first data packet to a destination.

71. (Previously Presented) The method of claim 70, wherein a second data packet destined for the IPD is conveyed to the second private IP address, and wherein the method further comprises:

routing the second data packet to the VPNC using the second private IP address;

receiving the second data packet at the VPNC;

encapsulating the received second data packet to form a second encapsulated data packet with a destination IP address comprising the second public IP address; and

conveying the second encapsulated data packet via a tunnel using the second public IP address as a destination IP address.

72. (Previously Presented) The method of claim 71, further comprising:

receiving the second encapsulated data packet;

un-encapsulating the second encapsulated data packet to recover the second data packet, the second data packet having the second public IP address as a destination IP address;

performing network address translation on the second data packet; and

conveying the second data packet to the IPD using the first private IP address as a destination address.

73. (Previously Presented) The method of claim 69, wherein the second private IP address of the service gateway is assigned by a service provider.

74. (Previously Presented) The method of claim 69, further comprising only encapsulating signaling packets conveyed by the IPD.

75. (Previously Presented) The method of claim 69,

wherein the first data packet comprises the first private IP address as a source IP address and a source port number; and

wherein performing said network address translation comprises changing the first private IP address to the second private IP address while leaving the source port number unchanged, wherein the second private IP address and the source port number may be used to uniquely identify the IPD.

76. (Previously Presented) One or more computer readable storage media, said media comprising program instructions for hosting voice over internet protocol communications, wherein the program instructions are executable to:

receive a first data packet with a private IP address at a service gateway (SG), the first data packet being conveyed with the private IP address from an internet protocol device (IPD);

perform network address translation (NAT) on the first data packet with a second private IP address.

77. (Previously Presented) The storage media of claim 76, wherein the program instructions are further executable to:

  encapsulate the translated first data packet to form a first encapsulated data packet, the first encapsulated data packet having a first public IP address as a destination address and a second public IP address as a source address; and

  convey the first encapsulated data packet from the SG via a tunnel.

78. (Previously Presented) The storage media of claim 77, wherein the program instructions are further executable to:

  receive the first encapsulated data packet via the tunnel at a virtual private network concentrator (VPNC);

  un-encapsulate the first encapsulated data packet to recover the first data packet including the second private IP address; and

  convey the first data packet to a destination.

79. (Previously Presented) The storage media of claim 78, wherein a second data packet destined for the IPD is conveyed to the first public IP address, and wherein the program instructions are further executable to:

  route the second data packet to the VPNC using the second private IP address;

  receive the second data packet at the VPNC;

  encapsulate the received second data packet to form a second encapsulated data packet with a destination IP address comprising the second public IP address; and

  convey the second encapsulated data packet via a tunnel using the second public IP

address as a destination IP address.

80. (Previously Presented) The storage media of claim 79, wherein the program instructions are further executable to:

receive the second encapsulated data packet;

un-encapsulate the second encapsulated data packet to recover the second data packet, the second data packet having the second public IP address as a destination IP address;

perform network address translation on the second data packet; and

convey the second data packet to the IPD using the first private IP address as a destination address.

81. (Previously Presented) A service gateway for use in a voice over internet protocol communications system, the service gateway comprising:

a first interface configured to receive a first data packet with a first private IP address from an internet protocol device (IPD); and

a second interface configured to communicate via a tunnel;

wherein the service gateway is configured to perform network address translation on the first data packet with a second private IP address.

82. (Previously Presented) The service gateway of claim 81, wherein the service gateway is further configured to:

encapsulate the translated first data packet to form a first encapsulated data packet, the first encapsulated data packet having a destination address comprising a first public IP address;

and

convey the first encapsulated data packet via a tunnel using a second public IP address as

a source IP address.

83. (Previously Presented) The service gateway of claim 82, wherein the first data packet

comprises the first private IP address as a source IP address and a source port number; and

wherein in performing said network address translation, the service gateway is configured to

change the first private IP address to the second private IP address while leaving the source port

number unchanged, wherein the second private IP address and the source port number may be

used to uniquely identify the IPD.

84. (Previously Presented) A system for hosted voice over internet protocol communications, the

system comprising:

an internet protocol device (IPD) configured to convey a first data packet with a private

IP address; and

a service gateway (SG);

wherein the SG is configured to: receive the first data packet with the private IP address;

and perform network address translation (NAT) on the first data packet with a first public IP

address.

85. (Previously Presented) The system of claim 84, wherein the SG is further configured to:

encapsulate the translated first data packet to form a first encapsulated data packet, the

first encapsulated data packet having a destination address comprising a second public IP address

different from the first public IP address; and

    convey the first encapsulated data packet via a tunnel using the second public IP address as a source IP address.

86. (Previously Presented) The system of claim 85, further comprising a virtual private network concentrator (VPNC) coupled to the SG via a network, wherein the VPNC is configured to:

    receive the first encapsulated data packet via the tunnel;

    un-encapsulate the first encapsulated data packet to recover the first data packet; and

    convey the first data packet to a destination using the first public IP address.

87. (Previously Presented) The system of claim 86, wherein a second data packet destined for the IPD is conveyed to the first public IP address, and wherein the VPNC is configured to:

    receive the second data packet routed using the first public IP address;

    encapsulate the received second data packet to form a second encapsulated data packet with a destination IP address comprising the second public IP address; and

    convey the second encapsulated data packet via a tunnel using the second public IP address as a destination IP address.

88. (Previously Presented) The system of claim 87, wherein the SG is configured to:

    receive the second encapsulated data packet;

    un-encapsulate the second encapsulated data packet to recover the second data packet, the second data packet having the first public IP address as a destination IP address;

    perform network address translation on the second data packet with the first public IP

address; and

convey the second data packet to the IPD using the private IP address as a destination
address.

89. (Previously Presented) The system of claim 85, wherein the first public IP address is
assigned by a voice over internet protocol provider, and the second public IP address is assigned
by a customer's internet service provider.

90. (Previously Presented) The system of claim 85, wherein the SG is configured to only
encapsulate packets conveyed by the IPD that are signaling packets.

91. (Previously Presented) The system of claim 85,

wherein the first data packet comprises the private IP address as a source IP address and a
source port number; and

wherein in performing said network address translation, the SG is configured to change
the private IP address to the first public IP address while leaving the source port number
unchanged, wherein the first public IP address and the source port number may be used to
uniquely identify the IPD.

92. (Previously Presented) A method for hosting voice over internet protocol communications,
the method comprising:

receiving a first data packet with a private IP address at a service gateway (SG), the first
data packet being conveyed with the private IP address from an internet protocol device (IPD);

and

  performing network address translation (NAT) on the first data packet with a first public

IP address.

93. (Previously Presented) The method of claim 92, further comprising:

  encapsulating the translated first data packet to form a first encapsulated data packet, the

first encapsulated data packet having a destination address comprising a second public IP address

different from the first public IP address; and

  conveying the first encapsulated data packet from the SG via a tunnel using the second

public IP address as a source IP address.

94. (Previously Presented) The method of claim 93, further comprising:

  receiving the first encapsulated data packet via the tunnel at a virtual private network

concentrator (VPNC);

  un-encapsulating the first encapsulated data packet to recover the first data packet; and

  conveying the first data packet from the VPNC to a destination using the first public IP

address.

95. (Previously Presented) The method of claim 94, wherein a second data packet destined for

the IPD is conveyed to the first public IP address, and wherein the method further comprises:

  routing the second data packet to the VPNC using the first public IP address;

  receiving the second data packet at the VPNC;

  encapsulating the received second data packet to form a second encapsulated data packet

with a destination IP address comprising the second public IP address; and

conveying the second encapsulated data packet via a tunnel using the second public IP address as a destination IP address.

96. (Previously Presented) The method of claim 95, further comprising:

receiving the second encapsulated data packet at the SG;

un-encapsulating the second encapsulated data packet to recover the second data packet, the second data packet having the first public IP address as a destination IP address;

performing network address translation on the second data packet with the first public IP address; and

conveying the second data packet to the IPD using the private IP address as a destination address.

97. (Previously Presented) The method of claim 93, wherein the first public IP address is assigned by a voice over internet protocol provider, and the second public IP address is assigned by a customer's internet service provider.

98. (Previously Presented) The method of claim 93, further comprising only encapsulating signaling packets conveyed by the IPD.

99. (Previously Presented) The method of claim 93,

wherein the first data packet comprises the private IP address as a source IP address and a source port number; and

wherein performing said network address translation comprises changing the private IP

address to the first public IP address while leaving the source port number unchanged, wherein

the first public IP address and the source port number may be used to uniquely identify the IPD.

100. (Previously Presented) One or more computer readable storage media, said media

comprising program instructions for hosting voice over internet protocol communications,

wherein the program instructions are executable to:

receive a first data packet with a private IP address at a service gateway (SG), the first

data packet being conveyed with the private IP address from an internet protocol device (IPD);

and

perform network address translation (NAT) on the first data packet with a first public IP

address.

101. (Previously Presented) The storage media of claim 100, wherein the program instructions

are further executable to:

encapsulate the translated first data packet to form a first encapsulated data packet, the

first encapsulated data packet having a destination address comprising a second public IP address

different from the first public IP address; and

convey the first encapsulated data packet from the SG via a tunnel using the second

public IP address as a source IP address.

102. (Previously Presented) The storage media of claim 101, wherein the program instructions

are further executable to:

receive the first encapsulated data packet via the tunnel at a virtual private network

concentrator (VPNC);

un-encapsulate the first encapsulated data packet to recover the first data packet; and

convey the first data packet from the VPNC to a destination using the first public IP

address.

103. (Previously Presented) The storage media of claim 102, wherein a second data packet

destined for the IPD is conveyed to the first public IP address, and wherein the program

instructions are further executable to:

route the second data packet to the VPNC using the first public IP address;

receive the second data packet at the VPNC;

encapsulate the received second data packet to form a second encapsulated data packet

with a destination IP address comprising the second public IP address; and

convey the second encapsulated data packet via a tunnel using the second public IP

address as a destination IP address.

104. (Previously Presented) The storage media of claim 103, wherein the program instructions

are further executable to:

receive the second encapsulated data packet at the SG;

un-encapsulate the second encapsulated data packet to recover the second data packet, the

second data packet having the first public IP address as a destination IP address;

perform network address translation on the second data packet with the first public IP

address; and

convey the second data packet to the IPD using the private IP address as a destination

address.

105. (Previously Presented) A service gateway for use in a voice over internet protocol

communications system, the service gateway comprising:

a first interface configured to receive a first data packet with a private IP address from an

internet protocol device (IPD); and

a second interface configured to communicate via a tunnel;

wherein the service gateway is configured to: perform network address translation

(NAT) on the first data packet with a first public IP address.

106. (Previously Presented) The service gateway of claim 105, wherein the service gateway is

further configured to:

encapsulate the translated first data packet to form a first encapsulated data packet, the

first encapsulated data packet having a destination address comprising a second public IP address

different from the first public IP address; and

convey the first encapsulated data packet via a tunnel using the second public IP address

as a source IP address.

107. (Previously Presented) The service gateway of claim 106,

wherein the first data packet comprises the private IP address as a source IP address and a

source port number; and

wherein in performing said network address translation, the service gateway is configured

to change the private IP address to the first public IP address while leaving the source port

number unchanged, wherein the first public IP address and the source port number may be used

to uniquely identify the IPD.

(ix) Evidence Appendix

There is no evidence provided with this Appeal.

(xi) Related Proceedings Appendix

There are no proceedings related to this Appeal.